

What is claimed:

1. A method for dynamically allocating signal processing resources in a wireless multichannel broadband base station (BBS) for a cellular communications network, said method comprising the steps of:

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determining a number of available channel processor (CP) resources which are unused in said BBS, each said CP processing any of a plurality of traffic channels contained on any frequency channel assigned to said BBS;

in response to notification of a subscriber call to be processed by a cell of said BBS, and determining if said number of available CP resources of said BBS is at least one;

selecting any of said available CP resources for processing of said call; and assigning said call to said available CP resource which has been selected.

2. The method according to claim 1 further comprising the step of decrementing the number of available CP resources by one after said assigning step.

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3. The method according to claim 1 further comprising the step of rejecting said call if all CP resources of said BBS are in use.

4. The method according to claim 3 further comprising the step of incrementing a count of rejected calls each time a call is rejected for lack of sufficient available CP resources.

5. The method according to claim 1 wherein said number of available CP resources is determined by counting the total number of CP resources assigned to said BBS, and decrementing said total number by at least one of, a total number of

active subscriber calls in a BBS and the number of CP resources assigned for handling control channel traffic in said BBS.

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6. The method according to claim 1 further comprising the step of incrementing said number of available CP resources in said cell when said call is terminated.

7. The method according to claim 1 further comprising the steps of: handing over said call from a first cell of said BBS to a target cell of said BBS; and continuing to process said call on said available CP resource which has been selected and assigned prior to said step of handing over said call to said target cell.

8. A resource management system for dynamically allocating signal processing resources in a wireless multichannel broadband base station (BBS) for a cellular communications network, comprising:

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means for determining a number of available channel processor (CP) resources which are unused in said BBS, each said CP processing any of a plurality of traffic channels contained on any frequency channel assigned to said BBS;

means responsive to notification of a subscriber call to be processed by said BBS, for determining if said number of available CP resources is at least one;

means for selecting any of said available CP resources for processing of said call; and

means for assigning said call to said available CP resource which has been selected.

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9. The system according to claim 8 further comprising means for decrementing the number of available CP resources by one after said assigning step.

10. The system according to claim 8 further comprising means for rejecting said call if all CP resources of said BBS are in use.

11. The system according to claim 10 further comprising means for incrementing a count of rejected calls each time a call is rejected for lack of sufficient available CP resources.

12. The system according to claim 8 wherein said means for determining a number of available CP resources which are unused in said BBS further includes means for counting the total number of CP resources assigned to said BBS, and decrementing said total number by at least one of, a total number of active subscriber calls in said BBS and the number of CP resources assigned for handling control channel traffic in said BBS.

13. The system according to claim 8 further comprising means for incrementing said number of available CP resources in said cell when said call is terminated.

14. The system according to claim 8 further comprising:
means for handing over said call from a first cell of said BBS to a target cell of said BBS; and
means for continuing to process said call on said available CP resource as previously selected, after handing over said call to said target cell.